



**UN-GGIM:Americas**

REGIONAL COMMITTEE OF UNITED NATIONS  
ON GLOBAL GEOSPATIAL INFORMATION  
MANAGEMENT FOR THE AMERICAS



## **Expert Consultation and Meetings on enhancing geospatial information management arrangements and accelerating the implementation of the SDGs**

Including the third plenary meeting of the High-level Group of the Integrated Geospatial Information Framework, the meeting of the Expanded Bureau of the Committee of Experts, and the meeting and workshops of the SDG Data Alliance

**Instituto Nacional de Estadística y Geografía (INEGI)**

# **The UN-IGIF in México**

Progress and challenges in implementation

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2. First steps
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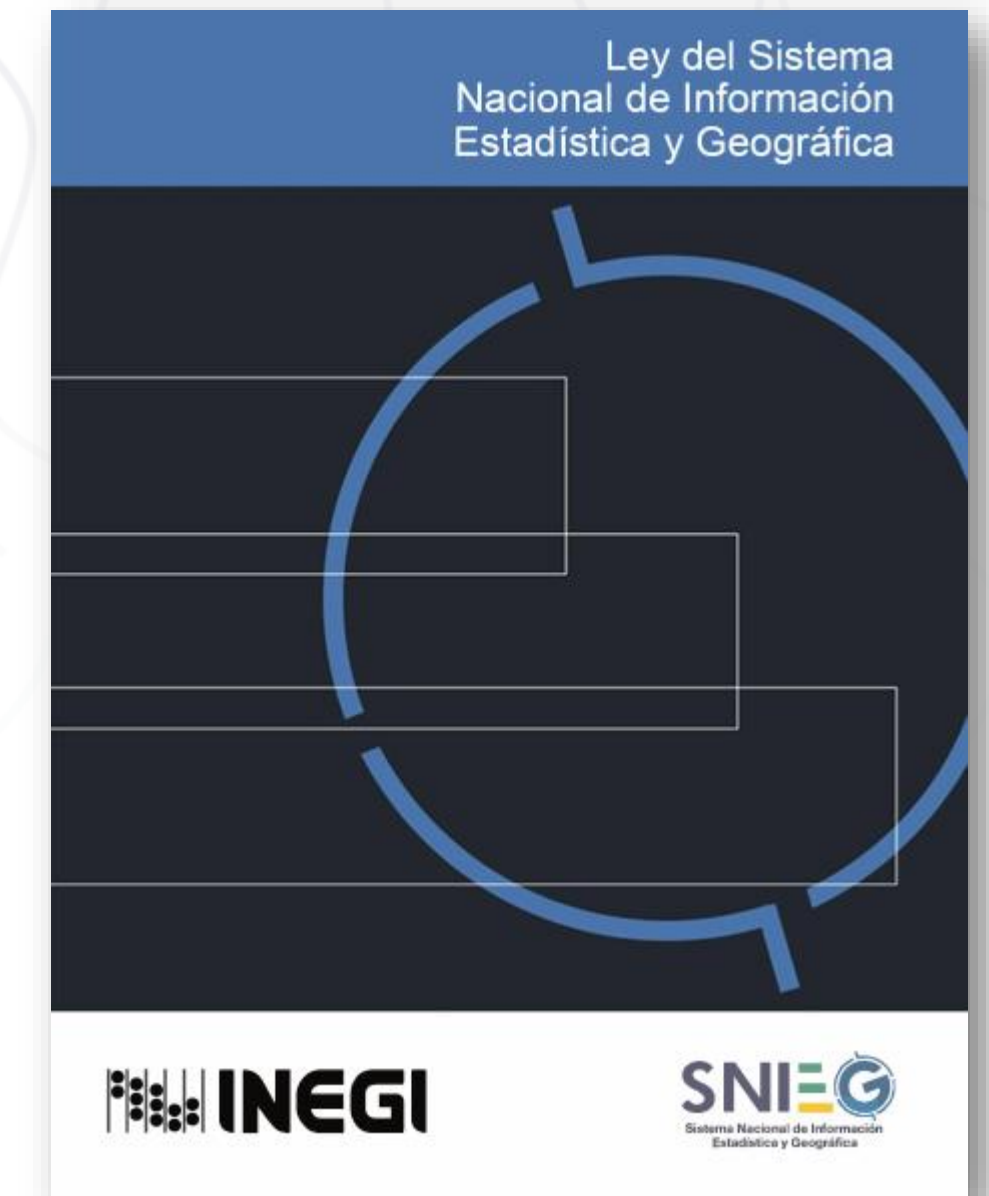
# 1. Background



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# 1.1 A bit of history

- ❑ Since 1962, **to describe the territory's geography, work has been done in Mexico.** With the improvement of computer equipment and informatic systems in the early 90's, the topics covered by these efforts increased while the time to obtain results decreased.
- ❑ In 2008, the National System of Statistical and Geographic Information (LSNIEG) law was enacted, with the aim of **“provide, to the state and society, quality, relevant, accurate and timely information, in order to contribute to national development.”**( 1).



1. INEGI. (2021). Law of the National Statistical and Geographic Information System.



# 1.2 INEGI as the SNIEG coordinator



- Within the framework of the National System of Statistical and Geographic Information (SNIEG), the **State Units** are the administrative areas with **faculties to develop statistical and geographic activities** or possess administrative records that allow obtaining Information of National Interest on different topics.



- According to the LSNIIEG, the **National Institute of Statistics and Geography (INEGI)** is **responsible for regulate and coordinate the activities of this Units**, in accordance to national and international standards, and the best practices in the matter.

## 2. First steps



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# 2.1 Participation in the IGIF International Seminar



**Title:** Why implement the Integrated Geospatial Information Framework (IGIF) in my country?

**Date:** July 7, 2022

**Modality:** Online

Organized by the Board of Directors of UN-GGIM Americas and the CARIGEO Coordinating Committee, with the collaboration of UN-GGIM Secretariat and the IGIF High Level Group.

# 2.2 World Bank Methodology

## 1. Preliminary diagnosis (INEGI)

### Diagnostic sheets by strategic route

**Preliminary diagnosis (INEGI)**

Indicator	Scoring Guide	Notes from Interview	Score	Weight	Weighted Score	Guidance
3.1 <b>FINANCIAL GOVERNANCE AND ACCOUNTABILITY:</b> Is the financial management function supporting the agencies developing the SDI fully staffed, operating effectively and transparently, and has full accountability?	0 = None; 25 = There is no specific centralized responsibility for the SDI financial management, this is fragmented across individual agencies; 50 = There is a dedicated SDI financial management function but only basic accountancy functions such as bookkeeping are performed; 75 = A dedicated SDI financial budgeting and management function provides management accounts and undertakes investment appraisals; 100 = There is a Finance Director on SDI Governing Body with full responsibility for financial governance and accountability.	No se cuenta con un cuerpo o función de gestión financiera que apoye directamente a las agencias en el desarrollo y actividades de la IDE de manera particular. No existe una responsabilidad específica y centralizada de la gestión financiera de la IDE, cada Unidad del Estado es responsable por sí misma del manejo de sus recursos financieros, sustentados al Presupuesto de Egresos de la Federación (PEF) de cada ejercicio fiscal. El PEF es el documento de política pública elaborado por el Ejecutivo Federal a través de la Secretaría de Hacienda y Crédito Público en el que se describe la cantidad, la forma de distribución y el destino de los recursos públicos de los tres poderes, de los organismos autónomos, así como las transferencias a los gobiernos estatales y municipales.	25	1	25	<b>The purpose of this indicator is to assess the current state of financial control over expenditure on the SDI.</b> The financial management function is the part of the governance structure that manages the budget for on-going costs and investment new projects. It works within the accountancy rules for government departments and is responsible for reporting on the proper use of funds allocated to the Governing Body. This function normally evolves from SDI financial management within individual agencies to a more centralized function. This may reflect that the initial financing may come from foreign donors.
3.2 <b>BUSINESS MODEL:</b> Has a sustainable business model for a functional SDI been defined?	0 = Not defined. 25 = Organizational business models are in place for principal SDI supply agencies, but SDI component not defined. 50 = Governing Body understanding of need to define sustainable SDI business model is a work in progress. 75 = Sustainable SDI business model defined and agreed. 100 = Sustainable SDI business model documented and regularly reviewed and update.	Existen modelos de negocios organizacionales definidos al interior de las principales Unidades del Estado proveedoras de información geoespacial, pero el componente de IDE no está definido. Por tanto, no existe un modelo de negocio de IDE que defina cuán exitosa y sostenible será dicha iniciativa desde el punto de vista financiero.	25	1	25	<b>This indicator assesses the extent to which a sustainable business model for the SDI exists.</b> The SDI business model defines how the SDI will be made economical, successful and sustainable. See IGF Part 2 Appendix titled "Example of a business model canvas" for further details. To be sustainable in the long-term the costs must be understood and financial management in place to keep costs within agreed limits. It is recognized that financial management can be fragmented across different agencies and different levels of government making it difficult to build sustainable business cases.

### Data audit

Icon	Data Theme	Themes / Datasets Currently Available	Responsible Organization	Does the annual budget adequately support updating?	Data Format and Technology	Geospatial Standard(s) used and are these interoperable with systems and services	% Country covered	Description of Quality	Latest Version	Revision Cycle	Access category, and Licensing
	Example: Geographical Names	The Official Geographic Names Dataset includes: approved road names, and geographical features such as hills, mountains, waterways, ocean features (ports), localities, and administrative boundaries.	Geographic Names Office, Survey Department, Ministry of Lands	The annual budget supports a full time staff. There is typically a 6-month lag between the request for the approval of a name and its gazetteal.	Official Geographic Names Dataset - Microsoft Excel File (Structured Fields). Other geographic names datasets (if Road Names) - MicroStation (if Topographic Database and Census Bureau	There are national geographical naming guidelines standards in use. The UNEGDI Topographic guidelines are adopted for placement of names on published topographic maps.	Approved Road Names exist mostly in urban areas and for all major highways. The Official Geographic Names Dataset covers the whole country but it is thought that only 20% of features are named in rural regions and townships.	The location of a named feature is manually recorded in an excel database (spreadsheet) and a geographic coordinate (latitude/longitude) is assigned. Coordinate values are subject to a high degree of human error. There is currently no funded improvement program.	The Official Geographic Names Dataset is made available on a quarterly basis.	The data is updated on a daily basis.	The Official Geographic Names Dataset is provided as an open access dataset licensed as CC-BY-NC. There are no privacy/geospatial restrictions. There are no restrictions on use. There is a fee required for commercial uses, a special license is available.
	Geodetic Reference Frame	Incluye los datos de las estaciones de las redes geodésicas nacionales (activa y pasiva), así como del geode gravimétrico.	INEGI	Todas las actualizaciones están contempladas dentro del presupuesto anual.	Los datos de la FIGMA se proporcionan en archivos RINEX; los datos del Geode Geométrico y los de la FIGNP se pueden consultar a través de la página del INEGI.	Los archivos RINEX que se proporcionan a los usuarios son un estándar conocido para datos GNSS.	Tanto los datos de la FIGMA Nacional, como los del Geode Geométrico cubren el 100% del territorio nacional.	Los datos de las estaciones de la FIGMA se obtienen de forma automatizada desde las estaciones y los datos de la FIGNP se obtienen conforme a programas de trabajo anuales. El Geode Geométrico se calculó mediante un análisis especializado de información del campo de gravedad e información topográfica proveniente de una cobertura extendida, desde Centroamérica hasta Estados Unidos.	No existe versionamiento para los datos de las estaciones de la FIGMA. La última versión del Geode Geométrico es la 2010.	Los datos de las estaciones de la FIGMA se actualizan diariamente y los de la FIGNP se publican quincenalmente; el Geode Geométrico o no tiene ciclo de revisión.	Los datos del marco de referencia son considerados públicos por lo que se publican sin restricciones y se descargan y usan.
	Geographical Names	Registro de Nombres Geográficos Continentales, Insulares y de las Formas del Relieve Submarino con fines estadísticos y geográficos	INEGI	Todas las actualizaciones están contempladas dentro del presupuesto anual.	La información está almacenada en una base de datos geográfica, utilizando el manejador de base de datos	Se aplican la Norma técnica para el registro de nombres geográficos continentales e insulares con fines estadísticos y geográficos; la Norma Técnica de Nombres Geográficos de las Formas del	No existe un cálculo de cobertura, pero el ámbito de aplicación del Registro de Nombres Geográficos abarca todo el territorio nacional.	Permanentemente se revisa la información de fuentes oficiales internas y externas para identificar los datos que cumplen con las especificaciones	24 de junio de 2022	Cada tres meses (cuatro actualizaciones por año)	Los datos del Registro de Nombres Geográficos son considerados públicos por lo que se publican sin restricciones y se descargan y usan.



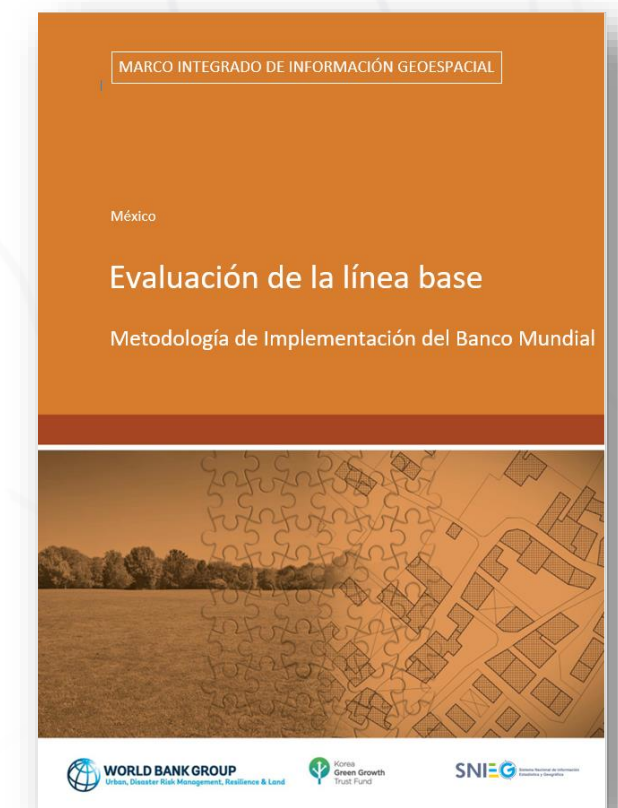


# 2.2 World Bank Methodology

## 2. Template integration

### I. Baseline assessment

Provides an assessment of the current state of geospatial information management in the country, structured around the nine IGIF pathways.



### II. Geospatial Alignment with Policy Drivers

Allows to align government strategic objectives and international commitments with specific geospatial use cases (applications), as well as prioritizing them based on how well they support and accelerate the achievement of these strategic objectives.



# 3. Migrating to UN-GGIM Methodology



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# 3.1 Methodological Change



## Templates (results) :

- Baseline Assessment
- Geospatial Alignment to Policy Drivers
- Socio-Economic Impact Assessment
- Action Plan



## Templates (results) :

- Stakeholder identification and analysis
- Action Plan (Roadmap)
- Reference survey
- Stakeholder Engagement Workshop
- Environment scanning and analysis
- Current and desired situation assessment
- Strategic alignment
- Gap Analysis Matrix
- Indicators of success
- Action plan at country level



# 4. UN-IGIF implementation progress



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# 4.1 Action plan development

## Component One. Execution Plan development

1. Project Initiation and Pre-needs Assessment ✓
2. Stakeholder Identification and Analysis ✓
3. Action Plan (Roadmap) ✓

## Component Two: Assessment and Analysis

4. Baseline Survey ✓
- 5. Stakeholder Engagement Workshop** ✓
6. Environmental Scanning and Analysis ✓
7. Current and Desired Situation Assessment ✓
8. Strategic Alignment (and Benefits) ✓
9. Vision, Mission and Goals ✓
10. Gap Analysis Matrix
11. Needs Assessment and Gap Analysis Report

## Component Three: Action plan development

12. Actions and subtasks of the strategic route
13. Implementation schedule
14. Budget estimates
15. Success Indicators
16. Country level action plan (template)

The image shows a document titled 'DESARROLLO DEL PLAN DE ACCIÓN' (Development of the Action Plan). It includes a '1. Propósito' (Purpose) section and a '2. Cronograma' (Schedule) section. The schedule is presented as a Gantt chart and a table with columns for 'Tarea Recomendada' (Recommended Task), 'Inicio' (Start), 'Fin' (End), 'Responsable' (Responsible), and 'Duración (en días)' (Duration in days). The tasks listed include 'Identificar el alcance del proyecto', 'Definir el alcance del proyecto', 'Realizar el diagnóstico', 'Definir la visión, misión y objetivos', 'Identificar a los actores', 'Realizar el análisis de la situación actual', 'Realizar el análisis de la situación deseada', 'Identificar las brechas', 'Definir las acciones y subacciones', 'Definir los indicadores de éxito', and 'Definir el presupuesto'. The dates range from June 2023 to May 2024.

# 4.2 Stakeholder engagement workshop

## Baseline Survey

Instrument

Template integrated with:

- 55 questions
- 5 levels of response

Key questions sources:

- World Bank
- UN-GGIM
- ECLAC Consultant

Preguntas	Selección de Respuesta	Argumentación y Acciones Propuestas
1. ¿Existe una Estrategia Nacional de Infraestructura de Datos Espaciales (IDE) que identifique la visión, misión, metas y objetivos de la iniciativa de gestión de la información geoespacial?	<input type="checkbox"/> Ninguna. <input type="checkbox"/> Se ha formado un comité o grupo de trabajo para formular la estrategia. <input type="checkbox"/> Se ha creado y firmado una estrategia sectorial por todas las partes interesadas. <input type="checkbox"/> Se ha acordado una estrategia nacional por las partes interesadas, pero no se integra con estrategias gubernamentales más amplias. <input type="checkbox"/> Se ha acordado una estrategia nacional por todas las partes interesadas y está alineada con estrategias gubernamentales más amplias.	
2. ¿Existe una declaración simple que resuma por qué las partes interesadas deberían involucrarse y utilizar la información geoespacial y por qué el gobierno necesita una IDE nacional?	<input type="checkbox"/> Ninguna. <input type="checkbox"/> Existe evidencia anecdótica sobre el valor de una IDE nacional. <input type="checkbox"/> Se ha realizado una alineación estratégica para identificar las prioridades clave del gobierno. <input type="checkbox"/> Se ha creado una propuesta de valor a partir de un análisis de impacto socioeconómico, pero no tiene una aceptación generalizada y no ha desencadenado un cambio significativo. <input type="checkbox"/> Los responsables de la toma de decisiones están plenamente convencidos de la propuesta de valor, derivada de un análisis de impacto socioeconómico completo, y de la importancia de la información geoespacial.	



# 4.2 Stakeholder engagement workshop



## Application Universe

- ❑ 26 State Units
- ❑ 46 people
- ❑ 4 workgroups



## Achievements:

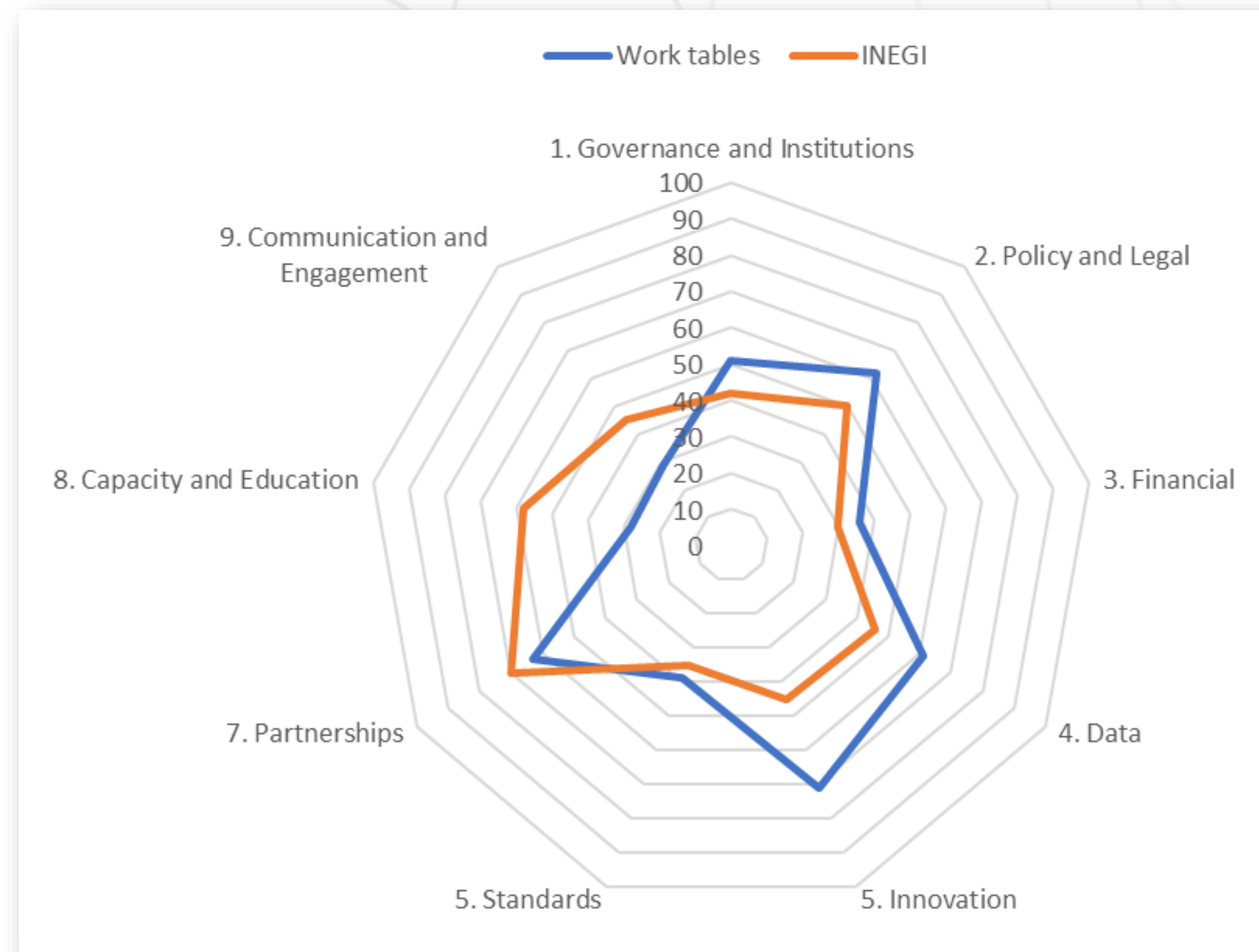
- ❑ There was **significant participation from the EU**, enriching the debate and analysis of the workgroups.
- ❑ Elements were obtained **to integrate a national diagnosis** .
- ❑ Foundations were derived **to reduce gaps** identified through the **proposed actions**.
- ❑ Proposed actions will serve to **guide the National Action Plan, aligned with the programmatic instruments of the SNIEG** .



# 4.2 Stakeholder engagement workshop

## Results Summary

Strategic Pathway	INEGI	Work tables	Average by Pathway
1. Governance and Institutions	42	51	49
2. Policy and Legal	50	62	60
3. Financial	30	36	35
4. Data	46	61	58
5. Innovation	45	71	65
5. Standards	35	39	38
7. Partnerships	70	63	65
8. Capacity and Education	58	28	34
9. Communication and Engagement	45	29	32
<b>General average</b>	<b>46</b>	<b>48</b>	<b>48</b>





## 4.3 IGIF implementation: Conceptual criteria



- ❑ Based on UN-IGIF documents published by UN-GGIM on its official website.
- ❑ Adaptation of the main concepts of the UN-IGIF to the legal, regulatory, financial and organizational circumstances of Mexico, within the framework of the National System of Statistical and Geographic Information (SNIEG).
- ❑ Announce to the State Units of the SNIEG, other organizations and users involved in the geospatial ambit in Mexico, the conceptual criteria for the implementation of the Framework.

# 5. Next steps



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# 5.1 What's next?



## After the Workshop

- Evaluate and disseminate the results of the national diagnosis.
- Analyze the proposed actions.
- Guide the development of the **National Action Plan** based on the proposed actions.



**SNIEG programmatic instruments**

## National Action Plan

- Conclude the evaluation of the current situation versus the desired situation.
- Complete the evaluation of internal and external factors
- Alignment exercise to national strategic plans
- Needs Assessment and Gap Analysis Report
- Define success indicators
- Conclude our action plan at country level

# Thank you !

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